

The invention in which an exclusive right is claimed is defined by the following:

1. A method for automatically formatting a table to reflect a change in a visual appearance of a decorative panel that comprises a plurality of separate but visually related regions defined by the table, so that the table is formatted in regard to all visually related regions affected by the change in the visual appearance as a function of at least one attribute of an element of the table corresponding to the change in the visual appearance, comprising the steps of:

(a) detecting the change in the visual appearance of the decorative panel;

(b) associating the visual appearance of the decorative panel with at least one element of the table;

(c) determining a revision to the at least one attribute of the at least one element of the table corresponding to the change in the visual appearance of the decorative panel; and

(d) automatically applying the revision to the at least one attribute of the at least one element of the table so as to modify any other region affected by the change in the manner consistent with the change in the visual appearance of the decorative panel.

2. The method of Claim 1, further comprising the step of confirming that the revision results in a table defining a decorative panel corresponding to the decorative panel which has been changed conforms to at least one of a plurality of predefined patterns.

3. The method of Claim 1, wherein the table comprises a hypertext markup language (HTML) table.

4. The method of Claim 1, further comprising the step of enabling a user to change the visual appearance of the decorative panel through one of:

- (a) a graphical user interface (GUI); and
- (b) a document object model (DOM) using a scripting language.

5. The method of Claim 1, wherein the change in the visual appearance of the decorative panel comprises one of resizing the decorative panel, adding a region to the decorative panel, deleting a region from the decorative panel, relocating a region within the decorative panel, resizing a region of the decorative panel, and revising a visual characteristic of a region of the decorative panel.

6. The method of Claim 1, wherein the step of associating the visual appearance of the decorative panel with the at least one element of the table comprises the steps of:

- (a) defining a database storing a plurality of:
 - (i) properties of the decorative panel; and
 - (ii) relationships between the properties of the decorative panel;
- (b) mapping the plurality of properties of the decorative panel to a plurality of defined attributes for a plurality of defined elements comprising a table that conforms to specifications of a standard software language; and
- (c) determining the at least one element mapped to the visual appearance of the decorative panel that was changed.

7. The method of Claim 6, wherein the step of defining a database comprises the steps of:

(a) defining a hierarchical partition tree of nodes specifying coordinates of a location and bounding area of the regions of the decorative panel; and

(b) defining a property container comprising a property list that corresponds to a predefined visual structure of the decorative panel.

8. The method of Claim 1, wherein the step of determining a revision comprises the steps of:

(a) determining at least one region of the decorative panel that is affected by the change to the visual appearance of the decorative panel, as a function of predefined relationships among the regions of the decorative panel, thereby identifying at least one affected region;

(b) determining a change in a value for each affected region as a function of the predefined relationships and as a function of the change in the visual appearance of the decorative table;

(c) associating the at least one affected region with the at least one element of the table;

(d) associating the visual appearance of the decorative panel with the at least one attribute of the at least one element of the table; and

(e) determining a change in a value of the at least one attribute for each of the at least one element of the table, thereby determining the revision to the attribute of the at least one element.

9. The method of Claim 8, further comprising one of the steps of:
 - (a) automatically creating the visual appearance of the decorative panel by associating a generated image with the at least one element of the table; and
 - (b) enabling the user associate a selected image with the at least one element of the table.
10. The method of Claim 1, wherein the step of automatically applying the revision comprises the step of generating the formatting of the table with the at least one attribute incorporated into the at least one element, so that the formatting of the table conforms to specifications of a standard software language.
11. The method of Claim 2, wherein the step of confirming comprises the steps of:
 - (a) applying a plurality of inference rules to the formatting of the table, wherein the plurality of inference rules define patterns of regions; and
 - (b) determining whether the formatting of the table conforms to at least one of the plurality of patterns of regions.
12. The method of Claim 1, further comprising the step of indicating that the table is no longer associated with the decorative panel if the revision will not result in a formatting of the table providing a decorative panel conforming to at least one of the plurality of patterns of regions.
13. A memory medium on which are stored machine instructions for carrying out the steps of Claim 1.

14. A system for automatically formatting a table to reflect a change in a visual appearance of a decorative panel that comprises a plurality of separate but visually related regions defined by the table, so that formatting of the table is modified in regard to all visually related regions affected by the change in the visual appearance as a function of at least one attribute of an element of the table corresponding to the change in visual appearance, comprising:

- (a) a processor;
- (b) a display in communication with the processor and displaying the decorative panel; and
- (c) a memory in communication with the processor and storing machine instructions that cause the processor to carry out a plurality of functions, including:
 - (i) detecting the change in the visual appearance of the decorative panel when the visual appearance of the decorative panel is changed;
 - (ii) associating the visual appearance of the decorative panel with at least one element of the table;
 - (iii) determining a revision to the at least one attribute of the at least one element of the table, corresponding to the change in the visual appearance of the decorative panel; and
 - (iv) automatically applying the revision to the at least one attribute of the at least one element of the table so as to modify any other region affected by the change in the manner consistent with the change in the visual appearance of the decorative panel.

15. The system of Claim 14, where the machine instructions further cause the processor to perform the function of confirming that the revision results in a table defining a decorative panel corresponding to the decorative panel which has been changed conforms to at least one of a plurality of predefined patterns.

16. The system of Claim 14, where the machine instructions further cause the processor to perform the functions of:

- (a) defining a database storing a plurality of:
 - (i) properties of the decorative panel; and
 - (ii) relationships between the properties of the decorative panel;
- (b) mapping the plurality of properties of the decorative panel to a plurality of defined attributes for a plurality of defined elements comprising a table that conforms to specifications of a standard software language; and
- (c) determining the at least one element mapped to the visual appearance of the decorative panel that was changed.

17. The system of Claim 16, where the machine instructions further cause the processor to perform the functions of:

- (a) defining a hierarchical partition tree of nodes specifying coordinates of a location and bounding area of the regions of the decorative panel; and
- (b) defining a property container comprising a property list that corresponds to a predefined visual structure of the decorative panel.

18. The system of Claim 14, where the machine instructions further cause the processor to perform the functions of:

(a) determining at least one region of the decorative panel that is affected by the change to the visual appearance of the decorative panel, as a function of predefined relationships among the regions of the decorative panel, thereby identifying at least one affected region;

(b) determining a change in a value for each affected region as a function of the predefined relationships and as a function of the change in the visual appearance of the decorative table;

(c) associating the at least one affected region with the at least one element of the table;

(d) associating the visual appearance of the decorative panel with the at least one attribute of the at least one element of the table; and

(e) determining a change in a value of the at least one attribute for each of the at least one element of the table, thereby determining the revision to the attribute of the at least one element.

19. The system of Claim 18, where the machine instructions further cause the processor to perform one of the functions of:

(a) automatically creating the visual appearance of the decorative panel by associating a generated image with the at least one element of the table; and

(b) enabling the user associate a selected image with the at least one element of the table.

20. The system of Claim 16, where the machine instructions further cause the processor to perform the functions of:

- (a) applying a plurality of inference rules to the formatting of the table, wherein the plurality of inference rules define patterns of regions; and
- (b) determining whether the formatting of the table conforms to at least one of the plurality of patterns of regions.

21. A method for automatically formatting a plurality of cells of a table in a Web document responsive to a change in visual appearance of a decorative panel comprising a plurality of regions mapped to the plurality of cells of the table, comprising the steps of:

- (a) enabling a user to change the visual appearance of the decorative panel with a Web document design tool by changing only one component of the decorative panel;
- (b) detecting the change to the one component;
- (c) determining at least one related region that has a visual relationship to the one component that was changed;
- (d) determining a change to the at least one related region as a function of the visual relationship of the at least one related region to the one component and as a function of the change in the one component; and
- (e) automatically applying:
 - (i) the change to an attribute of a cell that is mapped to the one region; and
 - (ii) the change to the attribute of each cell that is mapped to each related region, thereby creating a formatted table.

22. The method of Claim 21, further comprising the step of confirming that the formatted table corresponds to a decorative panel conforming to at least one of a plurality of predefined patterns of the plurality of regions.